Volume I, Section 9
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9 Overview of Qualification Tests

9.1 Scope

This section provides an overview of the testing process for qualification testing of voting systems. Qualification testing is the process by which a voting system is shown to comply with the requirements of the Standards and the requirements of its own design and performance specifications.

Qualification testing encompasses the examination of software; tests of hardware under conditions simulating the intended storage, operation, transportation, and maintenance environments; the inspection and evaluation of system documentation; and operational tests to validate system performance and function under normal and abnormal conditions. The testing also evaluates the completeness of the vendor's developmental test program, including the sufficiency of vendor tests conducted to demonstrate compliance with stated system design and performance specifications, and the vendor's documented quality assurance and configuration management practices. The tests address individual system components or elements, as well as the integrated system as a whole. Since 1994, qualification tests for voting systems have been performed by Independent Test Authorities (ITAs) certified by the National Association of State Election Directors (NASED). NASED has certified an ITA for either the full scope of qualification testing or a distinct subset of the total scope of testing. The test process described in this section may be conducted by one or more ITAs, depending on the nature of tests to be conducted and the expertise of the certified ITAs.

Qualification testing is distinct from all other forms of testing, including developmental testing by the vendor, certification testing by a state election organization, and system acceptance testing by a purchasing jurisdiction:

- Qualification testing follows the vendor's developmental testing;
- Qualification testing provides an assurance to state election officials and local jurisdictions of the conformance of a voting system to the Standards as input to state certification of a voting system and acceptance testing by a purchasing jurisdiction; and
- Qualification testing may precede state certification testing, or may be conducted in parallel as established by the certification program of individual states.

Generally a voting system remains qualified under the standards against which it was tested, as long as all modifications made to the system are evaluated and passed by a certified ITA. The qualification test report remains valid for as long as the voting system remains unchanged from the last tested configuration. However, if a new threat to a particular voting system is discovered, it is the prerogative of NASED to determine which qualified voting systems are vulnerable, whether those systems need to be retested, and the specific tests to be conducted. In addition, when new standards supersede the standards under which the system was qualified, it is the prerogative of NASED to determine when systems that were qualified under the earlier standards will lose their qualification, unless they are tested to meet current standards.

The remainder of this section describes the documentation and equipment required to be submitted by the vendor, the scope of qualification testing, the applicability to voting system components, and the flow of the test process.

9.2 Documentation Submitted by Vendor

The vendor shall submit to the ITA documentation necessary for the identification of the full system configuration submitted for evaluation and for the development of an appropriate test plan by the ITA for system qualification testing.

One element of the documentation is the Technical Data Package (TDP). The TDP contains information that that defines the voting system design, method of operation, and related resources. It provides a system overview and documents the system's functionality, hardware, software, security, test and verification specifications, operations procedures, maintenance procedures, and personnel deployment and training requirements. It also documents the vendor's configuration management plan and quality assurance program. If the system was previously qualified, the TDP also includes the system change notes.

This documentation is used by the ITA in constructing the qualification testing plan and is particularly important in constructing plans for the re-testing of systems that have been qualified previously. Re-testing of systems submitted by vendors that consistently adhere to particularly strong and well documented quality assurance and configuration management practices will generally be more efficient than for systems developed and maintained using less rigorous or less well documented practices. Volume II provides a detailed description of the documentation required for the vendor's quality assurance and configuration management practices used for the system submitted for qualification testing.

9.3 Voting Equipment Submitted by Vendor

Vendors may seek to market a complete voting system or an interoperable component of a voting system. Nevertheless, vendors shall submit for testing the specific system configuration that is to be offered to jurisdictions or that comprises the component to be marketed plus the other components with which the vendor recommends that component be used. The system submitted for testing shall meet the following requirements:

a. The hardware submitted for qualification testing shall be equivalent, in form and function, to the actual production versions of the hardware units or the COTS hardware specified for use in the TDP;

b. The software submitted for qualification testing shall be the exact software that will be used in production units;

c. Engineering or developmental prototypes are not acceptable, unless the vendor can show that the equipment to be tested is equivalent to standard production units in both performance and construction; and

d. Benchmark directory listings shall be submitted for all software/firmware elements (and associated documentation) included in the vendor's release as they would normally be installed upon setup and installation.

9.4 Testing Scope

The qualification test process is intended to discover vulnerabilities that, should they appear in actual election use, could result in failure to complete election operations in a satisfactory manner.

Five types of focuses guide the overall qualification testing process:

- Operational accuracy in the recording and processing of voting data, as measured by target error rate, for which the maximum acceptable error rate is no more than one in ten million ballot positions, with a maximum acceptable error rate in the test process of one in 500,000 ballot positions (while it would be desirable that there be an error rate of zero, if this had to be proven by a test, the test itself would take an infinity of time);
- Operational failures or the number of unrecoverable failures under conditions simulating the intended storage, operation, transportation, and maintenance environments for voting systems, using an actual time-based period of processing test ballots;
- System performance and function under normal and abnormal conditions; and

- Completeness and accuracy of the system documentation and configuration management records to enable purchasing jurisdictions to effectively install, test, and operate the system.

Qualification testing complements and evaluates the vendor's developmental testing, including any beta testing. The ITA evaluates the completeness of the vendor's developmental test program, including the sufficiency of vendor tests conducted to demonstrate compliance with the Standards as well as the system's performance specifications. The ITA undertakes sample testing of the vendor's test modules and also designs independent system-level tests to supplement and check those designed by the vendor. Although some of the qualification tests are based on those prescribed in the Military Standards, in most cases the test conditions are less stringent, reflecting commercial, rather than military, practice. The ITA may use automated software testing tools to assist in this process if they are available for the software under examination.

The procedure for disposition of system deficiencies discovered during qualification testing is described in Volume II of the Standards. This procedure recognizes that some but not necessarily all operational malfunctions (apart from software logic defects) may result in rejection. Basically, any defect that results in or may result in the loss or corruption of voting data, whether through failure of system hardware, software, or communication, through procedural deficiency, or through deficiencies in security and audit provisions, shall be cause for rejection. Otherwise, malfunctions that result from failure to comply fully with other requirements of this standard will not in every case warrant rejection. Specific failure definition and scoring criteria are also contained in Volume II.

9.4.1 Test Categories

The qualification test procedure is presented in several parts:

- Functionality testing;
- Hardware testing;
- Software evaluation;
- System-level integration tests, including audits; and
- Examination of documented vendor practices for quality assurance and for configuration management.

In practice, there may be concurrent indications of hardware and software function, or failure to function, during certain examinations and tests. Operating tests of hardware partially exercise the software as well and therefore supplement software qualification. Security tests exercise hardware, software and communications

capabilities. Documentation review conducted during software qualification supplements the review undertaken for system-level testing.

The qualification test procedures are presented in these categories because test authorities frequently focus separately on each. The following subsections provide information that test authorities need to conduct testing.

Not all systems being tested are required to complete all categories of testing. For example, if a previously-qualified system has had hardware modifications, the system may be subject only to non-operating environmental stress testing of the modified component, and a partial system-level test. If a system consisting of general purpose COTS hardware or one that was previously qualified has had modifications to its software, the system is subject only to software qualification and system-level tests, not hardware testing. However, in all cases the system documentation and configuration management records will be examined to confirm that they completely and accurately reflect the components and component versions that comprise the voting system.

9.4.1.1 Focus of Functionality Tests

Functionality testing is performed to confirm the functional capabilities of a voting system submitted for qualification. The ITA designs and performs procedures to test a voting system against the requirements outlined in Section 2. In order to best compliment the diversity of the voting systems industry, this part of the qualification testing process is not rigidly defined. Although there are basic functionality testing requirements, additions or variations in testing are appropriate depending on the system's use of specific technologies and configurations, the system capabilities, and the outcomes of previous testing.

9.4.1.2 Focus of Hardware Tests

Hardware testing begins with non-operating tests that require the use of an environmental test facility. These are followed by operating tests that are performed partly in an environmental facility and partly in a standard test laboratory or shop environment.

The non-operating tests are intended to evaluate the ability of the system hardware to withstand exposure to the various environmental conditions incidental to voting system storage, maintenance, and transportation. The procedures are based on test methods contained in Military Standards (MIL-STD) 810D, modified where appropriate, and include such tests as: bench handling, vibration, low and high temperature, and humidity.

The operating tests involve running the system for an extended period of time under varying temperatures and voltages. This period of operation ensures with confidence that the hardware meets or exceeds the minimum requirements for reliability, data reading, and processing accuracy contained in Section 3. The procedure emphasizes equipment operability and data accuracy; it is not an exhaustive evaluation of all system functions. Moreover, the severity of the test conditions, in most cases, has been reduced from that specified in the Military Standards to reflect commercial and industrial, rather than military and aerospace, practice.

9.4.1.3 Focus of Software Evaluation

The software qualification tests encompass a number of interrelated examinations, involving assessment of application source code for its compliance with the requirements spelled out in Volume I, Section 4. Essentially, the ITA will look at programming completeness, consistency, correctness, modifiability, structuredness and traceability, along with its modularity and construction. The code inspection will be followed by a series of functional tests to verify the proper performance of all system functions controlled by the software.

The ITA may inspect COTS generated software source code in the preparation of test plans and to provide some minimal scanning or sampling to check for embedded code or unauthorized changes. Otherwise, the COTS source code is not subject to the full code review and testing. For purposes of code analysis, the COTS units shall be treated as unexpanded macros.

9.4.1.4 Focus of System-Level Integration Tests

The functionality, hardware, and software qualification tests supplement a fuller evaluation performed by the system-level integration tests. System-level tests focus on these aspects jointly, throughout the full range of system operations. They include tests of fully integrated system components, internal and external system interfaces, usability and accessibility, and security. During this process election management functions, ballot-counting logic, and system capacity are exercised. The process also includes the Physical Configuration Audit (PCA) and the Functional Configuration Audit (FCA).

The ITA tests the interface of all system modules and subsystems with each other against the vendor's specifications. Some, but not all, systems use telecommunications capabilities as defined in Section 5. For those systems that do use such capabilities, components that are located at the poll site or separate vote counting site are tested for effective interface, accurate vote transmission, failure detection, and failure recovery. For voting systems that use telecommunications lines or networks that are not under the control of the vendor (e.g., public telephone networks), the ITA tests the interface

of vendor-supplied components with these external components for effective interface, vote transmission, failure detection, and failure recovery.

The security tests focus on the ability of the system to detect, prevent, log, and recover from a broad range of security risks as identified in Section 6. The range of risks tested is determined by the design of the system and potential exposure to risk. Regardless of system design and risk profile, all systems are tested for effective access control and physical data security. For systems that use public telecommunications networks, to transmit election management data or official election results (such as ballots or tabulated results), security tests are conducted to ensure that the system provides the necessary identity-proofing, confidentiality, and integrity of transmitted data. The tests determine if the system is capable of detecting, logging, preventing, and recovering from types of attacks known at the time the system is submitted for qualification. The ITA may meet these testing requirements by confirming the proper implementation of proven commercial security software.

The interface between the voting system and its users, both voters and election officials, is a key element of effective system operation and confidence in the system. At this time, general standards for the usability of voting systems by the average voter and election officials have not been defined, but are to be addressed in the next update of the Standards. However, standards for usability by individual voters with disabilities have been defined in Section 2.7 based on Section 508 of the Rehabilitation Act Amendments of 1998. Voting systems are tested to ensure that an accessible voting station is included in the system configuration and that its design and operation conforms with these standards.

The Physical Configuration Audit (PCA) compares the voting system components submitted for qualification to the vendor’s technical documentation and confirms that the documentation submitted meets the requirements of the Standards. As part of the PCA, the ITA also witnesses the buildof the executable system to ensure that the qualified executable release is built from the tested components.

The Functional Configuration Audit (FCA) is an exhaustive verification of every system function and combination of functions cited in the vendors' documentation. Through use, the FCA verifies the accuracy and completeness of the system's TDP. The various options of software counting logic that are claimed in the vendor’s documentation shall be tested during the system-level FCA. Generic test ballots or test entry data for DRE systems, representing particular sequences of ballot-counting events, will test the counting logic during this audit.

9.4.1.5 Focus of Vendor Documentation Examination

The ITA reviews the documentation submitted by the vendor to evaluate the extent to which it conforms to the requirements outlined in Sections 7 and 8 for vendor configuration and quality assurance practices. The ITA also evaluates the

conformance of other documentation and information provided by the vendor with the vendor's documented practices for quality assurance and configuration management.

The Standards do not require on-site examination of the vendor's quality assurance and configuration management practices during the system development process. However, the ITA conducts several activities while at the vendor site to witness the system build that enable assessment of the vendor's quality assurance and configuration management practices and conformance with them. These include surveys, interviews with individuals at all levels of the development team, and examination of selected internal work products such as system change requests and problem tracking logs.

9.4.2 Sequence of Tests and Audits

There is no required sequence for performing the system qualification tests and audits. For a new system, not previously qualified, a test using the generic test ballot decks might be performed before undertaking any of the more lengthy and expensive tests or documentation review. The ITA or vendor may, however, schedule the PCA, FCA, or other tests in any convenient order, provided that the prerequisite conditions for each test have been met before it is initiated.

9.5 Test Applicability

Qualification tests are conducted for new systems seeking initial qualification as well as for systems that are modified after qualification.

9.5.1 General Applicability

Voting system hardware, software, communications and documentation are examined and tested to determine suitability for elections use. Examination and testing addresses the broad range of system functionality and components, including system functionality for pre-voting, voting, and post-voting functions described in Section 2. All products custom designed for election use shall be tested in accordance with the applicable procedures contained in this section. COTS hardware, system software and communications components with proven performance in commercial applications other than elections, however, are exempted from certain portions of the test as long as such products are not modified for use in a voting system. Compatibility of these products all other components of the voting system shall be determined through functional tests integrating these products with the remainder of the system.

9.5.1.1 Hardware

Specifically, the hardware test requirements shall apply in full to all equipment used in a voting system with the exception of the following:

a. Commercially available models of general purpose information technology equipment that have been designed to an ANSI or IEEE standard, have a documented history of successful performance for relevant requirements of the standards, and have demonstrated compatibility with the voting system components with which they interface;

b. Production models of special purpose information technology equipment that have a documented history of successful performance under conditions equivalent to election use for relevant requirements of the standards and that have demonstrated compatibility with the voting system components with which they interface; and

c. Any ancillary devices that do not perform ballot definition, election database maintenance, ballot reading, ballot data processing, or the production of an official output report; and that do not interact with these system functions (e.g.; modems used to broadcast results to the press, printers used to generate unofficial reports, or CRTs used to monitor the vote counting process).

This equipment shall be subject to functional and operating tests performed during software evaluation and system-level testing. However, it need not undergo hardware non-operating tests. If the system is composed entirely of off-the-shelf hardware, then the system also shall not be subject to the 48-hour environmental chamber segment of the hardware operating tests.

9.5.1.2 Software

Software qualification is applicable to the following:

a. Application programs that control and carry out ballot processing, commencing with the definition of a ballot, and including processing of the ballot image (either from physical ballots or electronically activated images), and ending with the system's access to memory for the generation of output reports;

b. Specialized compilers and specialized operating systems associated with ballot processing; and

c. Standard compilers and operating systems that have been modified for use in the vote counting process.

Specialized software for ballot preparation, election programming, vote recording, vote tabulation, vote consolidation and reporting, and audit trail production shall be subjected to code inspection. Functional testing of all these programs during software

evaluation and system-level testing shall exercise any specially tailored software off-line from the ballot counting process (e.g.; software for preparing ballots and broadcasting results).

9.5.2 Modifications to Qualified Systems

Changes introduced after the system has completed qualification under these Standards or earlier versions of the national Voting System Standards will necessitate further review.

9.5.2.1 General Requirements for Modifications

The ITA will determine tests necessary for to qualify the modified system based on a review of the nature and scope of changes, and other submitted information including the system documentation, vendor test documentation, configuration management records, and quality assurance information. Based on this review, the ITA may:

a. Determine that a review of all change documentation against the baseline materials is sufficient for recommendation for qualification; or

b. Determine that all changes must be retested against the previously qualified version (this will include review of changes to source code, review of all updates to the TDP, and a performance of system-level and functional tests); or

c. Determine that the scope of the changes is substantial and will require a complete retest of the hardware, software, and/or telecommunications.

9.5.2.2 Basis for Limited Testing Determinations

The ITA may determine that a modified system will be subject only to limited qualification testing if the vendor demonstrates that the change does not affect demonstrated compliance with these Standards for:

a. Performance of voting system functions;

b. Voting system security and privacy;

c. Overall flow of system control; and

d. The manner in which ballots are defined and interpreted, or voting data are processed.

Limited qualification testing is intended to facilitate the correction of defects, the incorporation of improvements, the enhancement of portability and flexibility, and the integration of vote-counting software with other systems and election software.

9.6 Qualification Test Process

The qualification test process may be performed by one or more ITAs that together perform the full scope of tests required by the Standards. Where multiple ITAs are involved, testing shall be conducted first for the voting system hardware, firmware, and related documentation; then for the system software and communications; and finally for the integrated system as a whole. Voting system hardware and firmware testing may be performed by one ITA independently of the other testing performed by other ITAs. Testing may be coordinated across ITAs so that hardware/firmware tested by one ITA can be used in the overall system tests performed by another ITA.

Whether one or more ITAs are used, the testing generally consists of three phases:

- Pre-test Activities;
- Qualification Testing; and
- Qualification Report Issuance and Post-test Activities.

9.6.1 Pre-test Activities

Pre-test activities include the request for initiation of testing and the pre-test preparation.

9.6.1.1 Initiation of Testing

Qualification testing shall be conducted at the request of the vendor, consistent with the provision of the Standards. The vendor shall:

a. Request the performance of qualification testing from among the certified ITAs,

b. Enter into formal agreement with the ITAs for the performance of testing, and

c. Prepare and submit materials required for testing consistent with the requirements of the Standards.

Qualification testing shall be conducted for the initial version of a voting system as well as for all subsequent changes to the system prior to release for sale or for installation. As described in Section 9.5.2, the nature and scope of testing for system changes or new versions shall be determined by the ITA based on the nature and scope of the modifications to the system and on the quality of system documentation and configuration management records submitted by the vendor.

9.6.1.2 Pre-test Preparation

Pre-test preparation encompasses the following activities:

a. The vendor shall prepare and submit a complete TDP to the ITA. The TDP should consist of the items listed in Section 9.2 and specified in greater detail in Standards Volume II;

b. The ITA shall perform an initial review of the TDP for completeness and clarity and request additional information as required;

c. The vendor shall provide additional information, if requested by the ITA;

d. The vendor and ITA shall enter into an agreement for the testing to be performed by the ITA in exchange for payment by the vendor; and

e. The vendor shall deliver to the ITA all hardware and software needed to perform testing.

9.6.2 Qualification Testing

Qualification testing encompasses the preparation of a test plan, the establishment of the appropriate test conditions, the use of appropriate test fixtures, the witness of the system build and installation, the maintenance of qualification test data, and the evaluation of the data resulting from tests and examinations.

9.6.2.1 Qualification Test Plan

The ITA shall prepare a Qualification Test Plan to define all tests and procedures required to demonstrate compliance with Standards, including:

a. Verifying or checking equipment operational status by means of manufacturer operating procedures;

b. Establishing the test environment or the special environment required to perform the test;

c. Initiating and completing operating modes or conditions necessary to evaluate the specific performance characteristic under test;

d. Measuring and recording the value or range of values for the characteristic to be tested, demonstrating expected performance levels;

e. Verifying, as above, that the equipment is still in normal condition and status after all required measurements have been obtained;

f. Confirming that documentation submitted by the vendor corresponds to the actual configuration and operation of the system; and

g. Confirming that documented vendor practices for quality assurance and configuration management comply with the Standards.

A recommended outline for the test plan and the details of required testing are contained in Standards Volume II.

9.6.2.2 Qualification Test Conditions

The ITA may perform Qualification tests in any facility capable of supporting the test environment. The following practices shall be employed:

a. Preparations for testing, arrangement of equipment, verification of equipment status, and the execution of procedures shall be witnessed by at least one independent, qualified observer, who shall certify that all test and data acquisition requirements have been satisfied;

b. When a test is to be performed at "standard" or "ambient" conditions, this requirement shall refer to a nominal laboratory or office environment, with a temperature in the range of 68 to 75 degrees Fahrenheit, and prevailing atmospheric pressure and relative humidity; and

c. Otherwise, all tests shall be performed at the required temperature and electrical supply voltage, regulated within the following tolerances:

   1) Temperature +/- 4 degrees F

   2) Electrical supply voltage +/- 2 vac.

9.6.2.3 Qualification Test Fixtures

ITAs may use test fixtures or ancillary devices to facilitate qualification testing. These fixtures and devices may include arrangements for automating the operation of voting devices and the acquisition of test data:

a. For systems that use a light source as a means of detecting voter selections, the generation of a suitable optical signal by an external device is acceptable.

For systems that rely on the physical activation of a switch, a mechanical fixture with suitable motion generators is acceptable;

b. ITAs may use a simulation device, and appropriate software, to speed up the process of testing and eliminate human error in casting test ballots, provided that the simulation covers all voting data detection and control paths that are used in casting an actual ballot. In the event that only partial simulation is achieved, then an independent method and test procedure shall be used to validate the proper operation of those portions of the system not tested by the simulator; and

c. If the vendor provides a means of simulating the casting of ballots, the simulation device is subject to the same performance, reliability, and quality requirements that apply to the voting device itself.

9.6.2.4 Witness of System Build and Installation

Although most testing is conducted at facilities operated by the ITA, a key element of voting system testing shall be conducted at the vendor site. The ITA responsible for testing voting system software, telecommunications, and integrated system operation (i.e., system wide testing) shall witness the final system build, encompassing hardware, software and communications, and the version of associated records and documentation. The system elements witnessed, including their specific versions, shall become the specific system version that is recommended for qualification.

9.6.2.5 Qualification Test Data Requirements

The following qualification test data practices shall be employed:

a. A test log of the procedure shall be maintained. This log shall identify the system and equipment by model and serial number;

b. Test environment conditions shall be noted; and

c. All operating steps, the identity and quantity of simulated ballots, annotations of output reports, the elapsed time for each procedure step, and observations of equipment performance and, in the case of non-operating hardware tests, the condition of the equipment shall be recorded.

9.6.2.6 Qualification Test Practices

The ITA shall conduct the examinations and tests defined in the Test Plan such that all applicable tests identified in Standards Volume II are executed to determine compliance with the requirements in Sections 2-8 of the Standards. The ITA shall

evaluate data resulting from examinations and tests, employing the following practices:

a. If any malfunction or data error is detected that would be classified as a relevant failure using the criteria in Volume II, its occurrence, and the duration of operating time preceding it, shall be recorded for inclusion in the analysis of data obtained from the test, and the test shall be interrupted;

b. If a malfunction is due to a defect in software, then the test shall be terminated and system returned to the vendor for correction;

c. If the malfunction is other than a software defect, and if corrective action is taken to restore the equipment to a fully operational condition within 8 hours, then the test may be resumed at the point of suspension;

d. If the test is suspended for an extended period of time, the ITA shall maintain a record of the procedures that have been satisfactorily completed. When testing is resumed at a later date, repetition of the successfully completed procedures may be waived, provided that no design or manufacturing change has been made that would invalidate the earlier test results;

e. Any and all failures that occurred as a result of a deficiency shall be classified as purged, and test results shall be evaluated as though the failure or failures had not occurred, if the:

    1) Vendor submits a design, manufacturing, or packaging change notice to correct the deficiency, together with test data to verify the adequacy of the change;

    2) Examiner of the equipment agrees that the proposed change will correct the deficiency; and

    3) Vendor certifies that the change will be incorporated into all existing and future production units; and

f. If corrective action cannot be successfully taken as defined above, then the test shall be terminated, and the equipment shall be rejected.

9.6.3 Qualification Report Issuance and Post-test Activities

Qualification report issuance and post-test activities encompass the activities described below:

a. The ITA may issue interim reports to the vendor, informing the vendor of the testing status, findings to date, and other information. Such reports do not constitute official test reports for voting system qualification;

b. The ITA shall prepare a Qualification Test Report that confirms the voting has passed the testing conducted by the ITA. The ITA shall include in the

Qualification Test Report the date testing was completed, the specific system version addressed by the report, the version numbers of all system elements separately identified with a version number by the vendor, and the scope of tests conducted. A recommended outline for the test report is contained in Volume II;

c. Where a system is tested by multiple ITAs, each ITA shall prepare a Qualification Test Report;

d. The ITA shall deliver the Qualification Test Report to the vendor and to NASED;

e. NASED shall issue a single Qualification Number for the system to the vendor and to the ITAs. The issuance of a Qualification Number indicates that the system has been tested by certified ITAs for compliance with the national test standards and qualifies for the certification process of states that have adopted the national standards;

f. This number applies to the system as a whole only for the configuration and versions of the system elements tested by the ITAs and identified in the Qualification Test Reports. The Qualification Number does not apply to individual system components or untested configurations; and

g. The Qualification Number is intended for use by the states and their jurisdictions to support state and jurisdiction processes concerning voting systems. States and their jurisdictions shall request ITA Qualification Test Reports based on the Qualification Number as part of their voting system certification and procurement processes systems that rely on the Standards.

9.6.4 Resolution of Testing Issues

The NASED Voting Systems Board (the Board) is responsible for resolving questions about the application of the Standards in the testing of voting systems. The Secretariat for the Board will relay its decisions to the NASED certified ITAs and voting system vendors. The Federal Election Commission will monitor these decisions in order to determine which of them, if any, should be reflected in a subsequent version of the standards.